We claim:

- A method of treating or preventing a disorder comprising administering to a subject a therapeutically effective amount of enoxaparin, wherein the disorder displays enhanced activity of at least one of the matrix metalloproteinases neutrophil collagenase (MMP-8), aggrecanase, hADAMTS1, and gelatinase A (MMP-2).
- 2. The method of claim 1, wherein the disorder is a degenerative joint disorder, connective tissue disorder, wound healing disturbance, periodontal disorder, disorder of the locomotor system, or disturbance of bone metabolism.
- 3. The method of claim 2, wherein the disorder is osteoarthroses, spondyloses, chondrolysis, collagenoses, inflammatory, immunological or metabolism-related acute and chronic arthritides, arthropathies, or myalgias.
- 4. The method of claim 1, wherein the enoxaparin is administered by subcutaneous, intraarticular, intraperitoneal or intravenous injection.
- 5. The method of claim 4, wherein the enoxaparin is administered by intraarticular injection.
- 6. The method of claim 1, wherein the dose of enoxaparin is from about 5 μg to about 200 mg.
- 7. The method of claim 1, wherein the dose of enoxaparin is from about 10 μg to about 40 mg.
- 8. The method of claim 1, wherein the enoxaparin is administered rectally, orally, inhalationally, or transdermally.

- 9. A method of identifying inhibitors of aggrecanase activity comprising mixing ADAMTS1 with a test inhibitor molecule and a substrate, and identifying the presence or absence of neoepitopes generated by the aggrecanase activity of ADAMTS1 after a period of incubation.
- 10. The method of claim 9, wherein the ADAMTS1 is provided in a test kit.